



FIG. 3—Gold chloride with (+, -)cocaine.

TABLE 3—Abundance ratios.

Compound	<i>m/e</i> 74:96	<i>m/e</i> 152:150
Cocaine	>1	1-2
Pseudococaine	<1	3-7
Allococaine	<1	2-10
Pseudoallococaine	>1	1-3

122, 182, 198, and 272 are at a lower relative abundance and the molecular ion (*m/e* 303) is at a higher relative abundance than the corresponding ions of allococaine.

The mass spectral data for the cocaine isomers were obtained by direct insertion techniques rather than via a GLC interface. This was necessitated by a tendency of the less stable diastereoisomers, in particular pseudoallococaine, to thermally eliminate the elements of benzoic acid. The product of this thermal elimination is 2-carbomethoxytropidine (anhydroecgonine methyl ester). The electron impact fragmentation of this compound results in a spectrum with an *m/e* 152 base peak (Fig. 12). Since the differentiation of the diastereoisomeric cocaine isomers relies heavily on the relative abundance of the ion at *m/e* 152, thermal elimination in the GLC/MS interface could interfere with that assessment.